Dräger medical

A Dräger and Siemens Company

Field
Service
Procedure

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Fabius GS® and Fabius Tiro ™
Software Version 2.0N to 2.N Upgrade

Fabius GS and Fabius Tiro
Software Version 2.0N to 2.N Upgrade

INSTALLATION PROCEDURE

CAUTION: This procedure is **only** applicable for machines containing a 2.0N version. Verify the Fabius GS or Fabius Tiro machine currently being serviced meets these requirements prior to performing this Field Service Procedure.

CAUTION: Do not proceed with this procedure if the above conditions are not met.

NOTE: The screen illustrations contained in this document are for reference only and therefore may or may not reflect the software version or exact Fabius product being installed.

Installing Send Image (utility) file on laptop. (If applicable)

1. Turn on the PC and insert the software media in the appropriate drive.

2. Minimize all programs and check desktop area for the following icon.

3. If the 'SendImage' icon exists, proceed to 'Updating Send Image' Section.

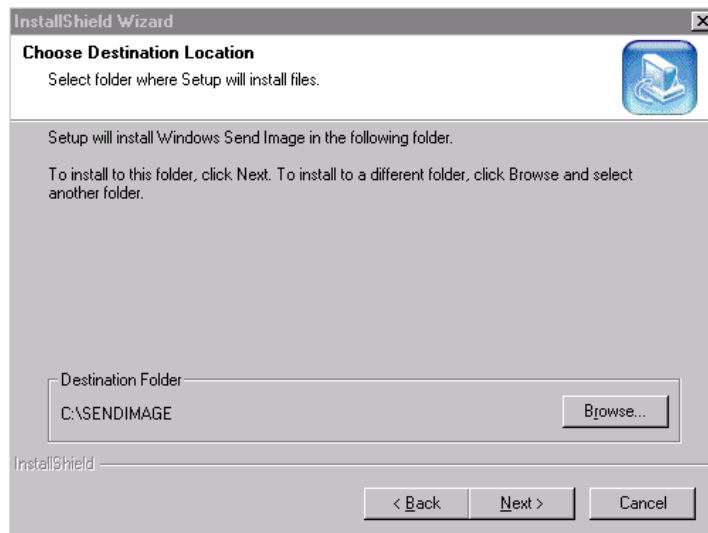4. Using Windows Explorer double click on the appropriate drive.

5. Double click on the 'send_image_install' file.

INSTALLATION PROCEDURE (continued)

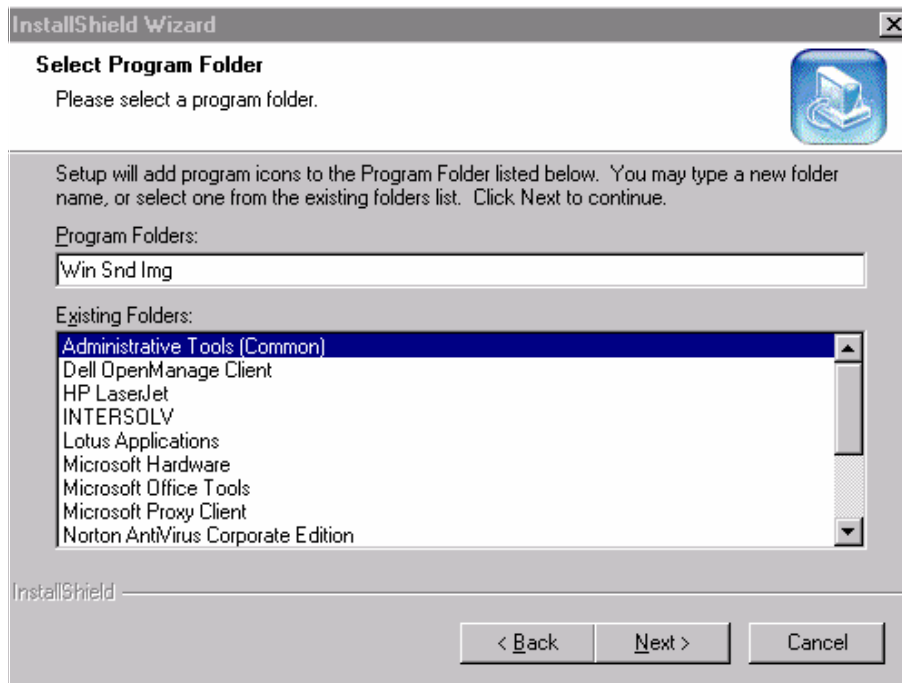6. Double click on the 'Setup.exe' file.

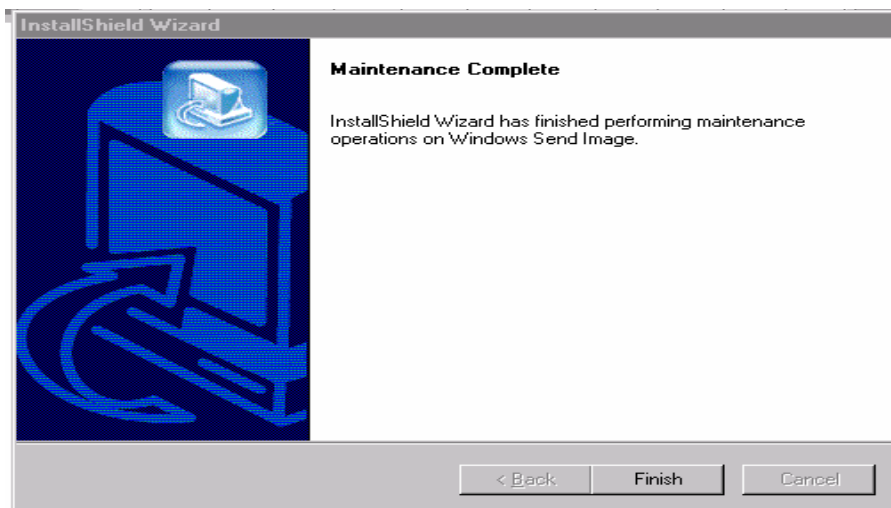7. Verify the following 'InstallShield Wizard' screen appears and the Destination Folder is C:. Choose 'Next'.

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INSTALLATION PROCEDURE (continued)

8. Choose 'Next' to the following screen.

9. The following screen shall appear. Choose 'Finish'. Proceed to .

INSTALLATION PROCEDURE (continued)
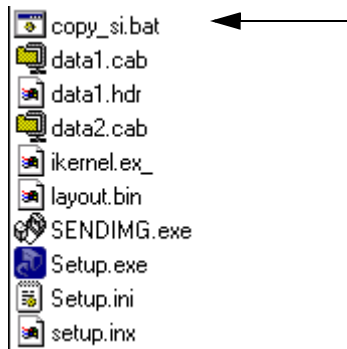
Updating Send Image (utility) file.

1. Minimize all programs and verify the 'Send Image' icon is located on the desktop.

2. Using Windows Explorer, double click on the appropriate drive and open the 'send_image_install' file.

3. Double click on the 'copy_si.bat' file. This updates your current 'Send Image' file to the latest version. Proceed to .

INSTALLATION PROCEDURE (continued)

Software Download Preparation

NOTE: Performing a software update may change certain machine settings. Record the following information prior to performing the software update for use after the software update has been completed.

1.0 Fabius GS Machines

1.1 Ensure the Fabius GS machine's power switch is in the ON position.

1.2 Access the Main Service Screen.

NOTE: Refer to Section 4 of the Fabius GS Service Manual for detailed instructions on accessing Service Screen settings within the software.

1.3 Record the following settings:

- Market Kit Settings (U.S./Non-U.S.)
- Threshold Low Alarm (Enable/Disable)
- Plateau/Mean Display (Change Display)/(Plateau/Mean)
- Flowtube Resolution (Normal/High Res)
- Release Codes for any enabled Secure Options

1.4 Return the Fabius GS machine to the Standby Menu by pressing the Standby key on the display panel.

1.5 At the Standby Menu, access the Standby Setup Menu by pressing the Setup key on the display panel.

1.6 Record the following setting(s):

- Waveform Display (Filled/Normal)

NOTE: If the U.S. Market Kit is selected, the Language setting will default to U.S. English and will not be displayed on the Standby Setup Screen.

- Language (if applicable)

1.7 Retain all recorded information for future use.

1.8 Power down the machine and position the machine's power switch to the OFF position.

1.9 Proceed to .

2.0 Fabius Tiro Machines

2.1 Ensure the Fabius Tiro machine's power switch is in the ON position.

2.2 Access the Main Service Screen.

INSTALLATION PROCEDURE (continued)

NOTE: Refer to the Diagnostics Section of the Fabius Tiro Service Manual for detailed instructions on accessing Service Screen settings within the software.

2.3   Record the following settings:

- Market Kit Settings (U.S./Non-U.S.)
- Threshold Low Alarm (Enable/Disable)
- Plateau/Mean Display (Change Display)/(Plateau/Mean)
- Flowtube Resolution (Normal/High Res)
- Machine Type (Fabius GS/Fabius Tiro)
- Release Codes for any Secure Options

2.4   Return the Fabius Tiro machine to the Standby Menu by pressing the Standby key on the display panel.

2.5   At the Standby Menu, access the Standby Setup Menu by pressing the Setup key on the display panel.

2.6   Record the following setting(s):

- Waveform Display (Filled/Normal)

NOTE: If the U.S. Market Kit is selected, the Language setting will default to U.S. English and will not be displayed on the Standby Setup Screen.

- Language (if applicable)

2.7   Retain all recorded information for future use.

2.8   Power down the machine and position the machine's power switch to the OFF position.

2.9   Proceed to .

INSTALLATION PROCEDURE (continued)

Performing Software Download

NOTE: Verify the machine power switch is in the OFF position.

1. From desktop, double-click the new icon named 'SENDIMG' or 'send_img'. The 'Communications Settings' screen will appear. Configure the 'Communications Settings' as follows:
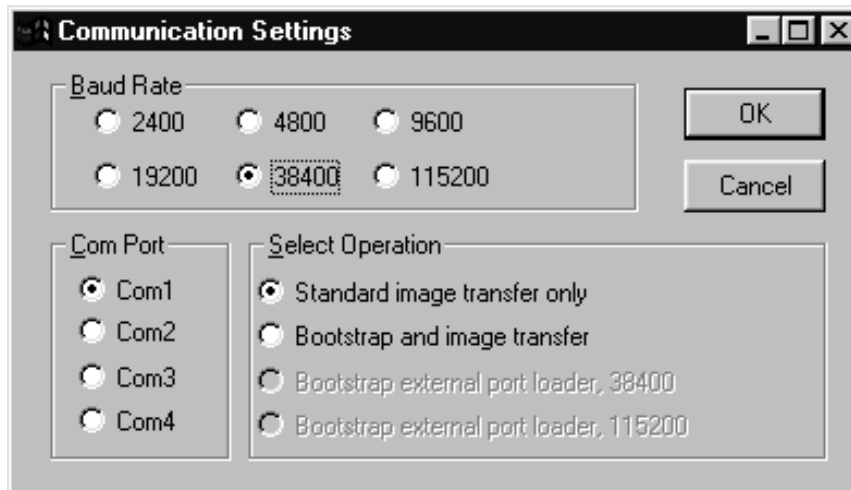
INSTALLATION PROCEDURE (continued)

2. Press Enter or click OK. Connect the download cable from Com1 on the laptop computer to the serial interface port on the Fabius GS or Fabius Tiro. Refer to FIGURE 1. for serial interface port locations.

REAR VIEW OF FABIUS TIRO

SERIAL INTERFACE PORT

REAR VIEW OF FABIUS GS
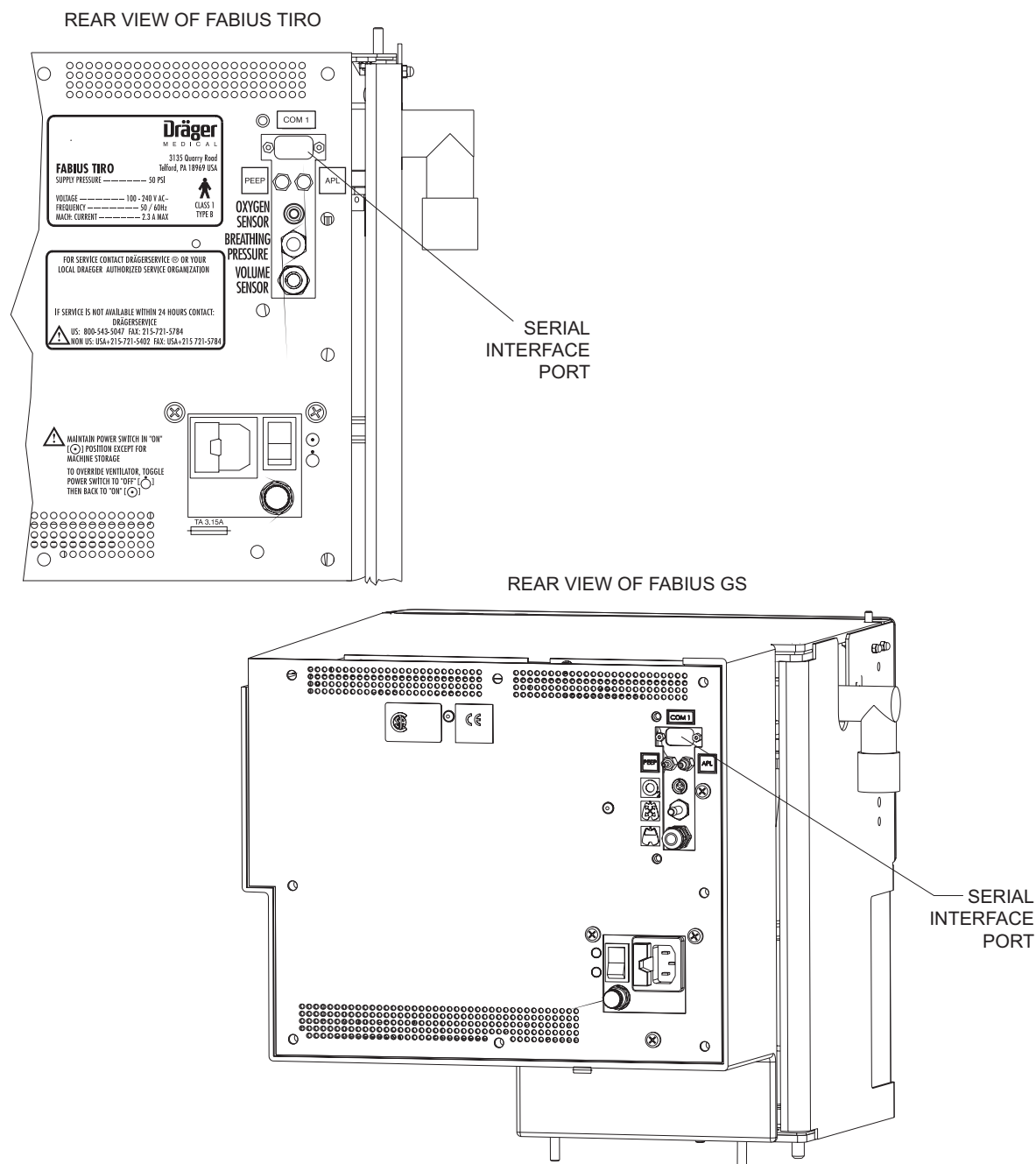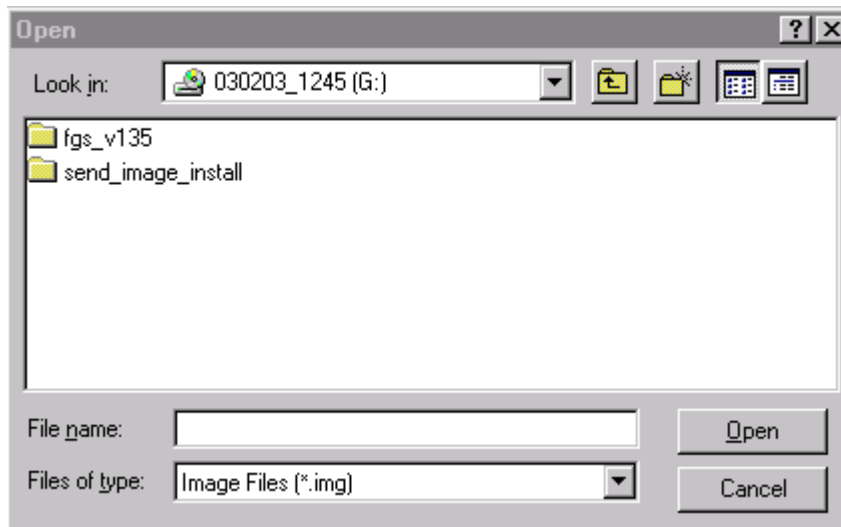
SERIAL INTERFACE PORT

SP29701

FIGURE 1. Fabius GS and Fabius Tiro Serial Port Locations

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INSTALLATION PROCEDURE (continued)

3. From the drop-down box, select the CD Drive.

4. Double click the 'software image' folder (fgs_vxxx) or (ftiro_vxxx). The 'Fabius GS.IMG' file or the 'Fabius Tiro.IMG' is displayed.
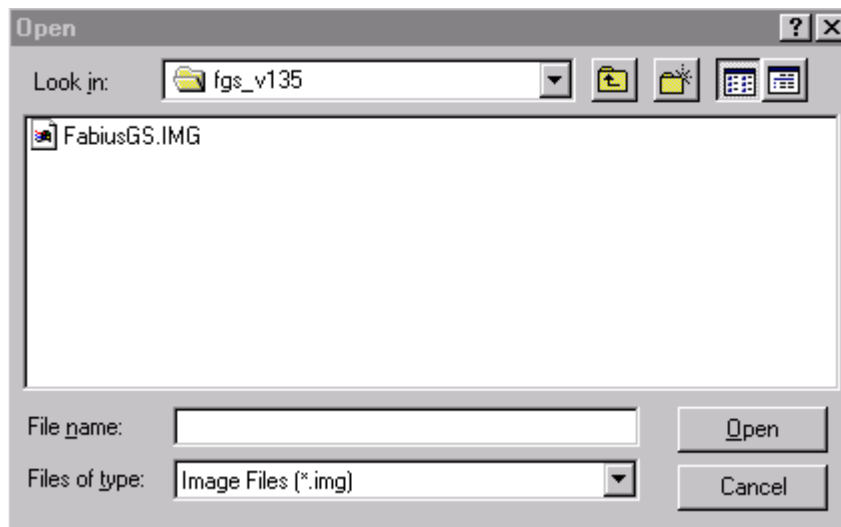
INSTALLATION PROCEDURE (continued)

5. Double-click the '.IMG' file or single-click (highlight), then press 'Enter'. The following sample screen will be displayed:
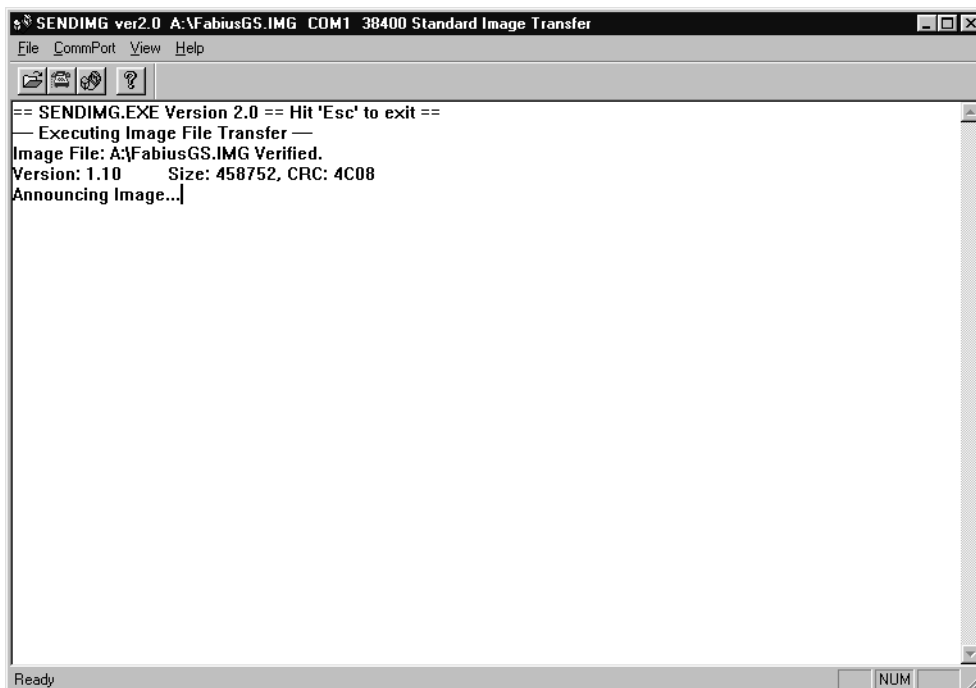
6. Set the machine's power switch to ON. The download process will start immediately.

7. As the software is downloading, programming blocks will appear on the machine display. See FIGURE 2. When the download is complete and successful, the display will appear as shown in FIGURE 3. If the download is unsuccessful, the display will appear as shown in FIGURE 4.

INSTALLATION PROCEDURE (continued)

In Progress

Fabius Tiro Image Loader

Loading
programming blocks

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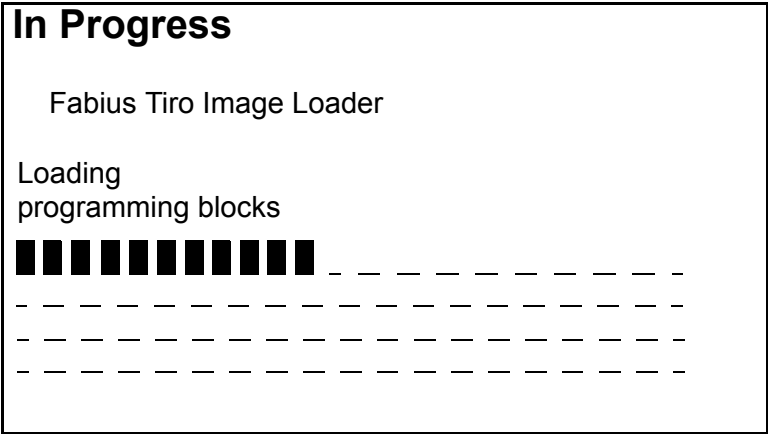
FIGURE 2. Image Loader Screen

Complete - Successful

Fabius Tiro Image Loader

Loading
Complete

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CRC Check Complete
Download Successful
Stop SENDIMG and cycle power

FIGURE 3. Image Loader Successful

Complete - Unsuccessful

Fabius Tiro Image Loader

Loading
Complete

Checking CRC of New Image
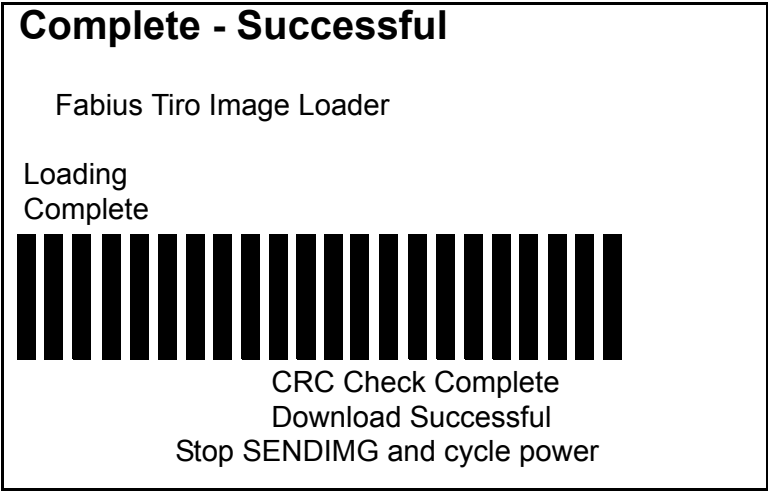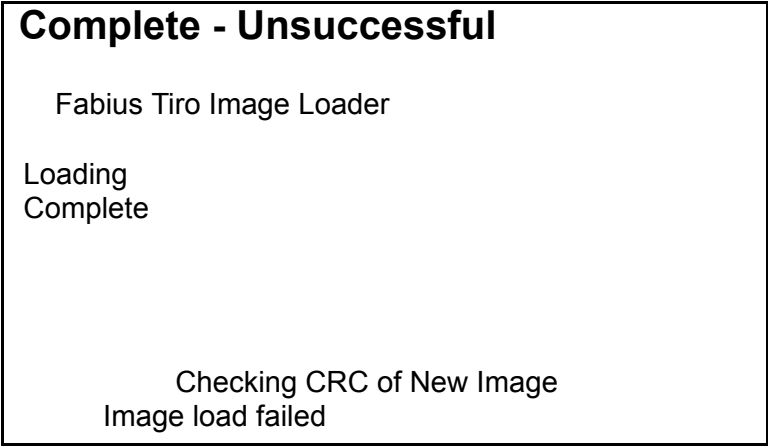Image load failed

FIGURE 4. Image Loader Unsuccessful

INSTALLATION PROCEDURE (continued)

8. Set the power switch on the Fabius GS or Fabius Tiro to OFF. Close the PC loader screen and power down the PC. Disconnect the interface cable.

9. Switch machine power to ON and verify all self-diagnostics indicate a Pass condition, except for NAVRAM. The NAVRAM test may indicate a FAIL condition during the initial System Diagnostics after a successful software download.

NOTE: The NVRAM test shall indicate a PASS condition after performing an additional power cycle.

10. Proceed to .

Software Update Conclusion

3.0 Fabius GS Machines

    3.1 Access the appropriate service screens (see Section 7.5 of the Fabius GS Service Manual) and update the machine serial number, clear service log and reset hours run. The machine serial number is located on the rear of the machine.

    3.2 Using the information recorded in steps 1.3 and 1.6, ensure that all settings reflect those recorded. If the software update has caused changes to any of these settings, reinstate those settings back to their original configuration. Refer to section 1.0 of this document for instructions on accessing the screens necessary to perform this operation.

4.0 Fabius Tiro Machines

    4.1 Access the appropriate service screens (see Appendix A, step 8.5 of the Fabius Tiro Service Manual) and update the machine serial number, clear service log and reset hours run. The machine serial number is located on the rear of the machine.

    4.2 Using the information recorded in steps 2.3 and 2.6, ensure that all settings reflect those recorded. If the software update has caused changes to any of these settings, reinstate those settings back to their original configuration. Refer to section 2.0 of this document for instructions on accessing the screens necessary to perform this operation.

5.0 Secure Options

    NOTE: Performing a software update may disable certain ventilator options. To restore these options, proceed with the following steps if the information recorded in steps 1.3 and 1.6 for Fabius GS machines or steps 2.3 and 2.6 for Fabius Tiro machines can not be used.

    5.1 Access the Secure Options screen located in the Main Service screen and obtain the Device ID, (Option) Description and Part Number. Refer to FIGURE 5. for locations of this information.

INSTALLATION PROCEDURE (continued)
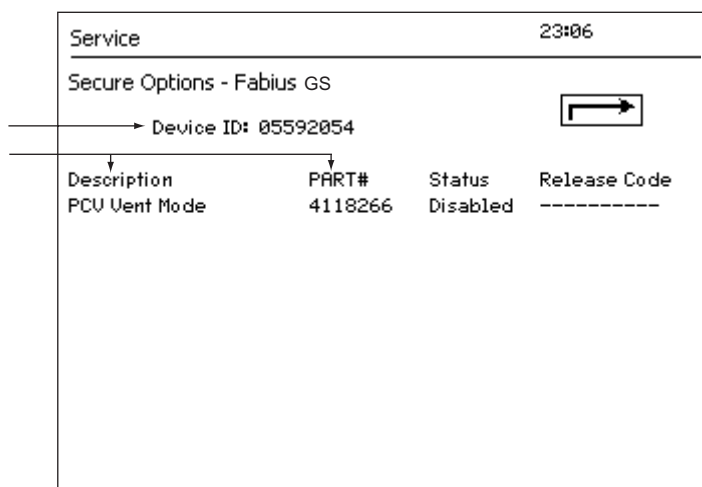

FIGURE 5. Secure Options Screen

5.1.1   Contact DrägerService - Technical Support: Phone 1-800-4-Drager, Phone: 215-721-5402, or e-mail to techsupport@draegermed.com and provide the following information to receive the necessary release code(s):

> -- Machine Type (Fabius GS or Fabius Tiro)
> -- (Option) Description and Part Number
> -- Machine Serial Number
> -- Device ID Number

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INSTALLATION PROCEDURE (continued)

Final Testing

6.0 Fabius GS Machines

6.1 Perform PMS test Steps 7.6, 7.7, 7.17, 7.18, 7.20 and 7.21 in Section 7 of the Fabius GS Service Manual. Verify the correct market kit settings are entered per original machine configuration or customer requirements. See Table 1:.

7.0 Fabius Tiro Machines

7.1 Perform PMS test Steps 8.6, 8.7, 8.17, 8.18, 8.20 and 8.21 in Appendix A, PMS Section of the Fabius Tiro Service Manual. Verify the correct market kit settings are entered per original machine configuration or customer requirements. See Table 2:.

8.0 Operator's Manual for Fabius GS or Fabius Tiro

8.1 Update the Fabius GS or Fabius Tiro Operator's Manual binder with the new Operator's Manual supplied in the Software Update kit.

INSTALLATION PROCEDURE (continued)

NOTE: To change the language and pressure measurement units, the "Market Selection" must be changed to "Non-U.S." (refer to the Section 4 of the Fabius GS Service Manual).

Table 1: Fabius GS Market Kit Settings

	O2 Whistle	Language	Date Format	Time Format	O2 Position	Alarm Sounds	Pres. Units
USA	Disabled	English	M/D/Y	12 Hour	Right	Drager	cmH2O
UK/Ireland	Enabled	UK English	D/M/Y	24 Hour	Left	EN740	mbar
France	Enabled	French	D/M/Y	24 Hour	Left	EN740	mbar
Germany	Enabled	German	D/M/Y	24 Hour	Left	EN740	mbar
Spain	Enabled	Spanish	D/M/Y	24 Hour	Left	EN740	mbar
Poland	Enabled	Polish	D/M/Y	24 Hour	Left	EN740	mbar
Italy	Enabled	Italian	D/M/Y	24 Hour	Left	EN740	mbar
Netherlands	Enabled	Dutch	D/M/Y	24 Hour	Left	EN740	mbar
Russia	Enabled	Russian	D/M/Y	24 Hour	Left	EN740	mbar
Sweden	Enabled	Swedish	D/M/Y	24 Hour	Left	EN740	mbar
Romania	Enabled	Romanian	D/M/Y	24 Hour	Left	EN740	mbar
Canada	Enabled	English	M/D/Y	12 Hour	Right	Drager	cmH2O
Egypt	Enabled	English	D/M/Y	24 Hour	Left	EN740	mbar
Mexico	Enabled	Spanish	D/M/Y	24 Hour	Right	Drager	mbar
Australia	Enabled	English	D/M/Y	24 Hour	Left	EN740	mbar
Hungary	Enabled	Hungarian	D/M/Y	24 Hour	Left	EN740	mbar
Turkey/Yugo-slavia	Enabled	UK English	D/M/Y	24 Hour	Left	EN740	mbar
Belgium/Lux-embourg	Enabled	French	D/M/Y	24 Hour	Left	Drager	mbar
Brazil	Enabled	Portuguese	D/M/Y	24 Hour	Right	EN740	mbar
Bulgaria/Fin-land	Enabled	UK English	D/M/Y	24 Hour	Left	EN740	mbar
Chile	Enabled	Spanish	D/M/Y	24 Hour	Right	EN740	mbar
Croatia	Enabled	Croation	D/M/Y	24 Hour	Left	EN740	mbar
Cuba	Enabled	Spanish	D/M/Y	24 Hour	Right	Drager	mbar
Czech Republic	Enabled	Czech	D/M/Y	24 Hour	Left	EN740	mbar
Guam/Somoa	Enabled	UK English	D/M/Y	24 Hour	Left	EN740	mbar

INSTALLATION PROCEDURE (continued)

Table 1: Fabius GS Market Kit Settings (Continued)

	O2 Whistle	Language	Date Format	Time Format	O2 Position	Alarm Sounds	Pres. Units
Jamaica	Enabled	UK English	D/M/Y	24 Hour	Left	EN740	mbar
Paraguay	Enabled	Spanish	D/M/Y	24 Hour	Right	EN740	mbar
Portugal	Enabled	Portuguese	D/M/Y	24 Hour	Left	EN740	mbar
Slovania	Enabled	Slovak	D/M/Y	24 Hour	Left	EN740	mbar
Switzerland	Enabled	German	D/M/Y	24 Hour	Left	EN740	mbar
Thailand	Enabled	UK English	D/M/Y	24 Hour	Left	EN740	mbar
Uraguay	Enabled	Spanish	D/M/Y	24 Hour	Right	Drager	mbar
Vietnam	Enabled	UK English	D/M/Y	24 Hour	Right	EN740	mbar
Argentina	Enabled	Spanish	D/M/Y	24 Hour	Right	Drager	cmH2O
China	Enabled	Chinese	M/D/Y	12 Hour	Right	Drager	mbar
Japan	Enabled	Japanese	M/D/Y	12 Hour	Right	Drager	hpa

NOTE: To change the language and pressure measurement units, the "Market Selection" must be changed to "Non-U.S." (refer to the Diagnostics Section of the Fabius Tiro Service Manual).

Table 2: Fabius Tiro Market Kit Settings

	O2 Whistle	Language	Date Format	Time Format	O2 Position	Alarm Sounds	Pres. Units
USA	Disabled	English	M/D/Y	12 Hour	Right	Drager	cmH2O
Germany	Enabled	German	D/M/Y	24 Hour	Left	EN740	mbar
UK/Ireland	Enabled	UK English	D/M/Y	24 Hour	Left	EN740	mbar
France	Enabled	French	D/M/Y	24 Hour	Left	EN740	mbar
Austria	Enabled	German	D/M/Y	24 Hour	Left	EN740	mbar
Belgium/Lux-embourg	Enabled	French	D/M/Y	24 Hour	Left	Drager	mbar
Switzerland	Enabled	German	D/M/Y	24 Hour	Left	EN740	mbar
Canada	Enabled	English	M/D/Y	12 Hour	Right	Drager	cmH2O
Spain	Enabled	Spanish	D/M/Y	24 Hour	Left	EN740	mbar
Netherlands	Enabled	Dutch	D/M/Y	24 Hour	Left	EN740	mbar
USA	Disabled	English	M/D/Y	12 Hour	Right	Drager	cmH2O
Germany	Enabled	German	D/M/Y	24 Hour	Left	EN740	mbar

INSTALLATION PROCEDURE (continued)

Table 2: Fabius Tiro Market Kit Settings (Continued)

	O2 Whistle	Language	Date Format	Time Format	O2 Position	Alarm Sounds	Pres. Units
UK/Ireland	Enabled	UK English	D/M/Y	24 Hour	Left	EN740	mbar
France	Enabled	French	D/M/Y	24 Hour	Left	EN740	mbar
Austria	Enabled	German	D/M/Y	24 Hour	Left	EN740	mbar
Belgium/Lux-embourg	Enabled	French	D/M/Y	24 Hour	Left	Drager	mbar

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